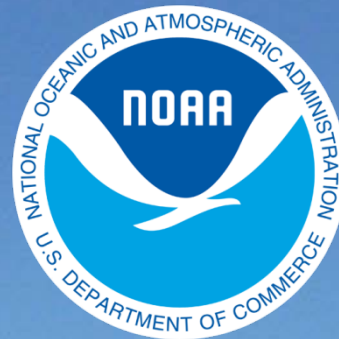
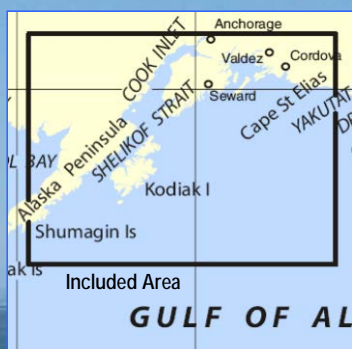


BookletChart™

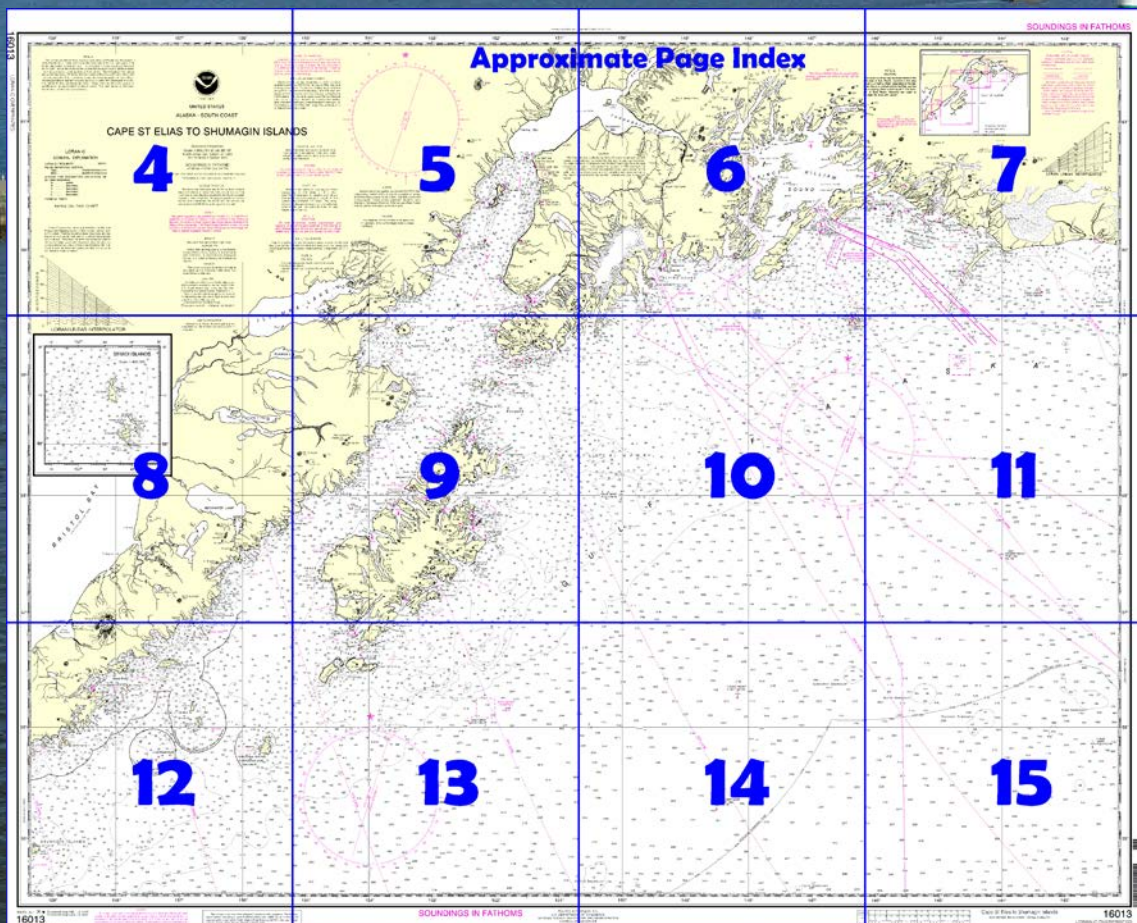
Cape St. Elias to Shumagin Islands NOAA Chart 16013



A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=16013>.



(Selected Excerpts from Coast Pilot)

From Cape Spencer the coast extends NW for about 130 miles to Yakutat Bay. The Fairweather Range begins 20 miles from Cape Spencer and extends to Alsek River. From Alsek River to Yakutat Bay the mountains are 4,000 to nearly 6,000 feet high. Along the coast are numerous glaciers with terminal moraines. The most conspicuous are La Perouse Glacier, with a sea face 200 to 300 feet high and partly vertical; Yakutat Glacier, 25 miles E of

Yakutat Bay; and the great Malaspina Glacier, W of Yakutat Bay. **Alaska Peninsula**, extending SW over 400 miles from Alaska mainland (59°30'N., 155°00'W.) to Isanotski Strait (54°52'N., 163°23'W.), is

mountainous with many irregular and bold peaks reaching 2,000 to 9,000 feet. **Pavlof Volcano** (55°25'N., 161°54'W.), the most prominent of several active volcanos on the peninsula, has three symmetrical peaks in a general N-S line; the middle and highest peak rises to almost 8,300 feet. **Frosty Peak** (55°04'N., 162°50'W.), a conspicuous snowcapped mountain with several irregular peaks near the SW end of the peninsula, reaches nearly 5,800 feet. There are many lakes and sizable streams on the peninsula; several portages cross between the adjacent bays. The S coast of the Alaska Peninsula from Cape Douglas (58°51'N., 153°17'W.) to Cape Pankof (54°40'N., 163°02'W.) is irregular and broken by numerous indentations affording anchorage. Some settlements, canneries, and fishing stations are scattered along the coast and among the off-lying islands.

Many vessels from southeast Alaska use the Shelikof Strait route SE of the Alaska Peninsula to the Bering Sea. The route is described in chapter 3. The run between Shelikof Strait and Shumagin Islands is one of the most difficult in Alaska because of the prevalent thick weather and unknown currents. The current effect near Foggy Cape (56°31'N., 157°00'W.) is particularly confusing.

Currents.—A continual current of considerable strength follows the coast all the way from Shelikof Strait to the Aleutian Islands. This W current is considered an eddy which accompanies the general E drift across the Pacific S of latitude 50°N., and forms a part of the general circulation of the North Pacific Ocean.

The current along the Alaska Peninsula has been called a warm current originating in the Gulf of Alaska and it doubtless assists in causing the S side of the peninsula to be warmer than the Bering Sea side. It is also well known that the islands off this coast have a milder climate than the mainland; almost the entire population of the area is found on them as a result.

The coastal current searches out all the passages, large and small, between and around the many islands, and in some of them it becomes strong enough to be important. An approaching NE storm gives warning by strengthening this current; in many places the current will indicate NE weather a day before the barometer falls. W winds weaken the current. On three runs between Chirikof Island and Castle Rock, a survey ship experienced a S set indicating an average strength of current of 1.5 knots.

The tidal currents in the vicinity of the S coast of the Alaska Peninsula are strong in many of the constricted passages. In the open waters offshore they are generally weak.

Prominent points and most off-lying islands on the S side of the Alaska Peninsula are adequately charted. However, much of the coast between Cape Douglas and Chignik Bay has not been surveyed. Notes on the unsurveyed portions are from the most reliable sources available; these waters should be used with caution.

Not all of the area has been surveyed, particularly in the bays and coves. Most of the Coast Pilot notes are from preliminary information obtained by a survey party working on control in 1945.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Juneau

Commander

17th CG District

Juneau, Alaska

(907) 463-2000

Table of Selected Chart Notes

NOTE
The Precautionary Area on this chart is part of a Traffic Separation Scheme approved by the International Maritime Organization (IMO).

HEIGHTS
Heights in feet above Mean High Water.

NOTE F
LIGHTS
Lights S, K, G and P in the vicinity of Copper River are maintained from May 1 to October 1.


Mercator Projection
Scale 1:969,761 at Lat 58° 00'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

NOTE D
The Prince William Sound vessel traffic service is shown on charts 16700, 16708 and 16709.

NOTE E
CAUTION
Unusual currents may be encountered in the area east of Seal Rocks. Currents in this area usually run East to West, regardless of the tide. When the wind is blowing from the East, and the tide is ebbing, there is a strong set in the direction of Seal Rocks. Mariners are urged to navigate the area with caution.

CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.
Covered wells may be marked by lighted or unlighted buoys.

NOTE G
CAUTION
Unusual turbulence (eight to ten foot waves) may be encountered.
Vessels transiting this area should exercise caution.

CAUTION
Hydrographic details and aids to navigation are not generally shown where larger scale coverage is available.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
⊙ (Accurate location) ○ (Approximate location)

AUTHORITIES
Hydrography and topography by the National Ocean Service/ Coast Survey, with additional data from the U. S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

CAUTION
Mariners are urged to use caution when navigating in the area of this chart. Significant changes in depths and shoreline may have occurred as a result of the earthquake of March 27, 1964. The magnitude of change is known only at selected sites which are indicated by note on the larger scale charts.

For Symbols and Abbreviations see Chart No. 1

MAGNETIC VARIATION
Magnetic variation curves are for 2006 derived from 2005 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System of 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE H
CAUTION
Oil well structures, some submerged and capped, and submerged pipelines in the vicinity of and between such structures are shown on charts 16660 and 16640 but are not shown on this chart.

NOTE B
Mariners are encouraged to use extreme CAUTION when approaching Kachemak Bay on a south or central course due to extreme heavy concentration of fixed crab fishing gear and fishing vessels. Vessel transits to and from Homer not more than two miles seaward from the 10 fathom curve from Anchor Point to Bluff Point should clear the fixed gear.

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, AK, or at the Office of the District Engineer, Corps of Engineers in Anchorage, AK. Refer to charted regulation section numbers.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION
The Cook Inlet area is affected by land uplift due to forces such as post-seismic crustal rebound. As a result, the tidal datums including mean lower low water, the plane of reference used for depth soundings, have changed throughout this region. Tidal datums were updated in 1999 and depths of 11½ fathoms or less on this chart were adjusted accordingly to account for this uplift. As the uplift rates can only be estimated and areas continue to rise, depths may be shallower than charted. Mariners are urged to exercise caution.

NOTE X
The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1986, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State or Federal law. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Federal fisheries jurisdiction and limit of states' jurisdiction under the Submerged Lands Act (P.L. 83-31; 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification, as represented on future charts. The lines shown on the most recent chart edition take precedence.

LOPAN-C
GENERAL EXPLANATION

LOPAN-C FREQUENCY	100KHZ
PULSE REPETITION INTERVAL	7960
	7960 Microseconds
	9990 Microseconds
STATION TYPE DESIGNATORS: (Not individual station letter designators)	
M	Master
X	Secondary
Y	Secondary
Z	Secondary

EXAMPLE: 7960-X

RATES ON THIS CHART

9990-X 9990-Y 9990-Z

7960-X 7960-Y

LOpan-C correction tables published by the National Imagery and Mapping Agency or others should not be used with this chart. The lines of position shown have been adjusted based on theoretically determined overlaid signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the maximum accuracy criteria established by the U.S. Coast Guard. Accuracy is cautioned not to rely solely on the lattices in inshore waters.

159°

158°

157°

156°

155°

NOTE X

The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1986, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State or Federal law. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Federal fisheries jurisdiction and limit of states' jurisdiction under the Submerged Lands Act (P.L. 83-31; 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification, as represented on future charts. The lines shown on the most recent chart edition take precedence.



UNITED STATES

ALASKA - SOUTH COAST

CAPE ST ELIAS TO SHUMAGIN ISLANDS

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY 100kHz.

PULSE REPETITION INTERVAL

7960 79,600 Microseconds

9990 99,900 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators)

M Master

W Secondary

X Secondary

Y Secondary

Z Secondary

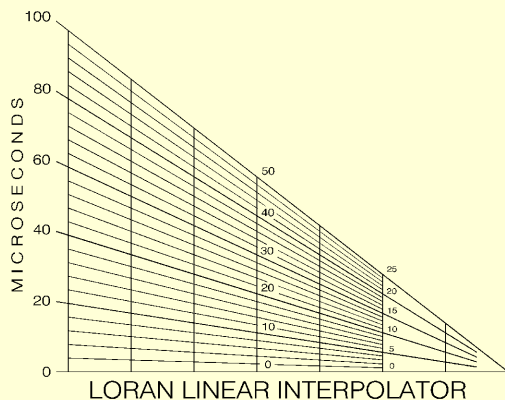
EXAMPLE: 7960-X

RATES ON THIS CHART

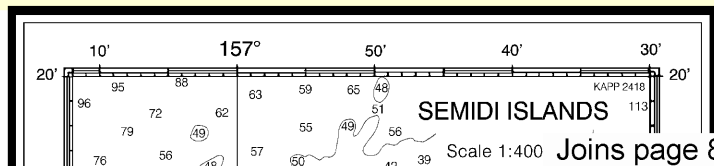
7960-X 7960-Y

9990-X 9990-Y 9990-Z

Loran-C correction tables published by the National Imagery and Mapping Agency or others should not be used with this chart. The lines of position shown have been adjusted based on theoretically determined overland signal propagation delays. They have not been verified by comparison with survey data. Every effort has been made to meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.



LORAN LINEAR INTERPOLATOR



SEMIDI ISLANDS

Scale 1:400 Joins page 8

MAGNETIC

Magnetic variation curve 2005 World Magnetic Model change. If annual change is it is additive and the variation change is opposite in direction and the variation is decreases

PRINT-ON-DEMAND

NOAA and its partner, Coast Guard, update weekly by NOAA critical corrections. Charts using Print-on-Demand technology are available 5-8 weeks before NOAA charts. Ask your chart dealer or contact NOAA at <http://NauticalCharts.gov>, OceanGrafix@1-877-56CHARTS or help@OceanGrafix.com.

RADAR

Radar reflectors have been shown for navigation, particularly for the identification of omitted from this chart.

WA

The prudent mariner will consult the Coast Guard Light List and U.S. Coast Guard Light List and U.S. Coast Guard Light List.

CA

Mariners are urged to navigate in the Significant changes line may have occurred earthquake of March 2011. Sites which are indicated on larger scale charts.

NO

CAUTION

Oil well structures, capped, and submerged and between such structures 16660 and 16640 but are not shown.

POLLUTION

Report all spills of oil and hazardous materials to the Coast Guard facility at telephone 1-800-424-8153.

NOT

CAUTION

Unusual turbulence (e.g., eddies) may be encountered. Vessels transiting this area should exercise caution.

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
○ (Accurate location) ○ (Approximate location)

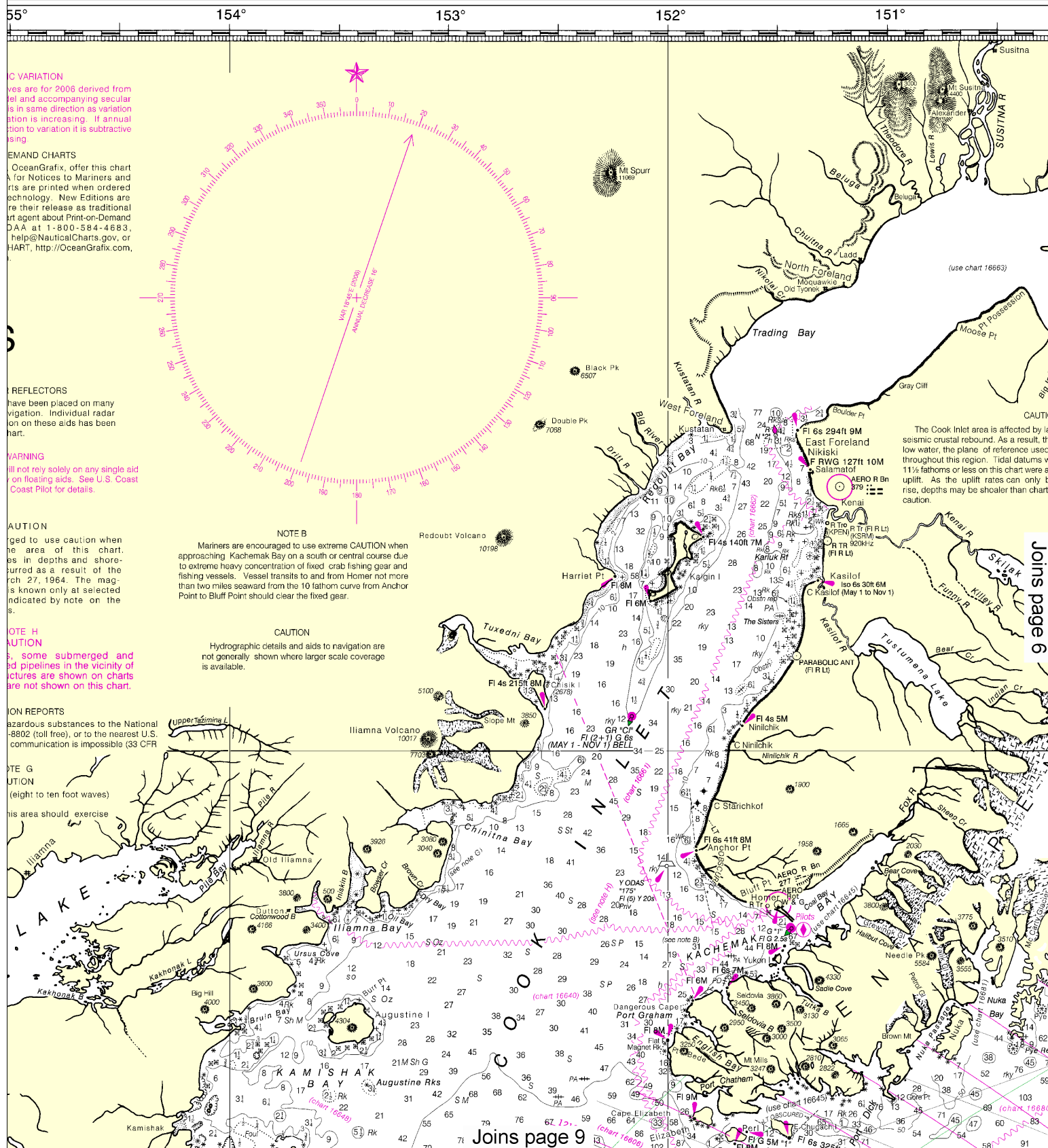
AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

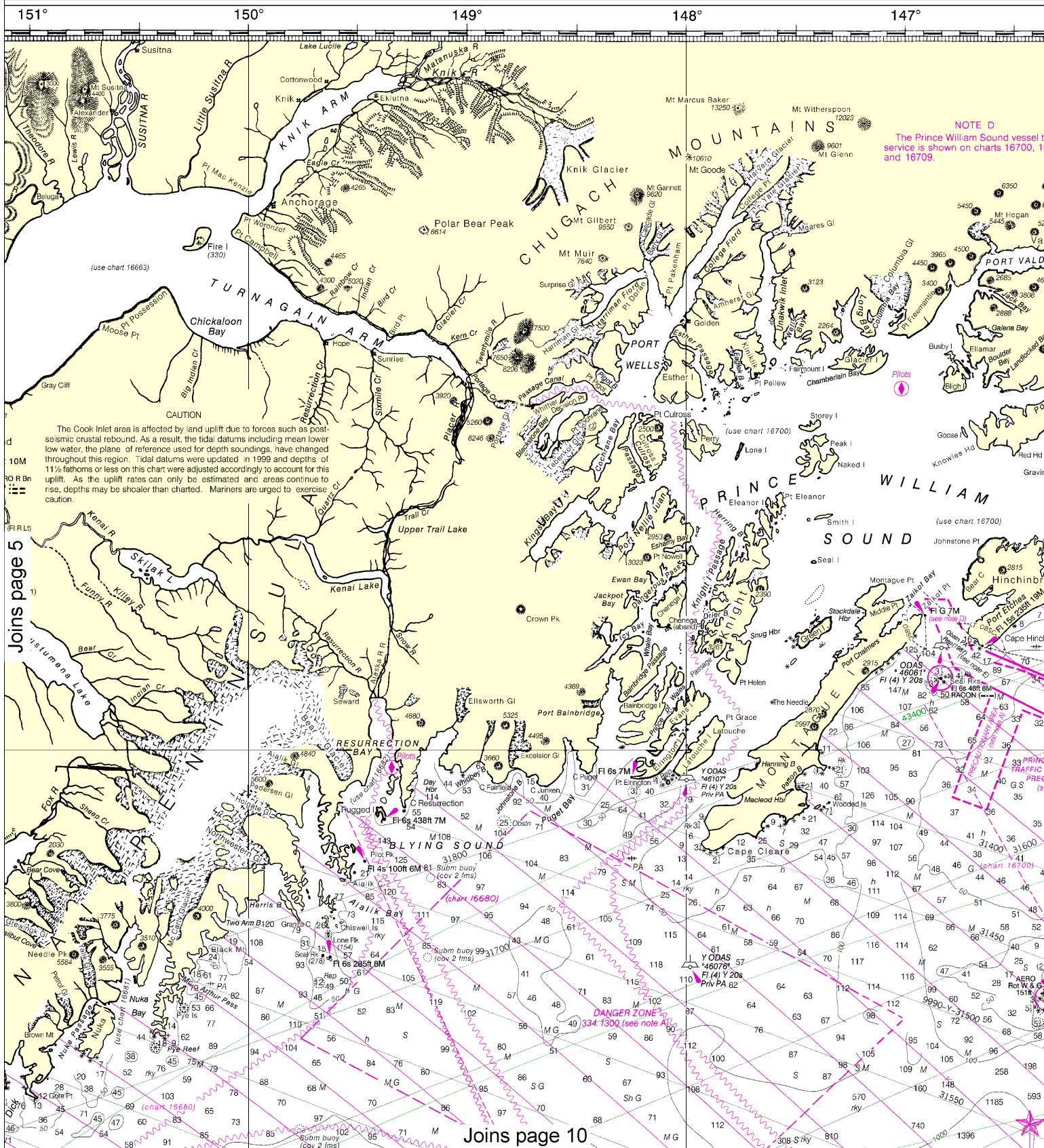
ILLIAMNA

Big Island

Kukaklek L.



This BookletChart was reduced to 70% of the original chart scale.
The new scale is 1:1385373. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



Note: Chart grid lines are aligned with true north.

SOUNDINGS IN FATHOMS

146° 145° 144° 143°

INDEX TO NEXT LARGER SCALE CHARTS

NOTE E
CAUTION
Unusual currents may be encountered in the area east of Seal Rocks. Currents in this area usually run East to West, regardless of the tide. When the wind is blowing from the East, and the tide is ebbing, there is a strong set in the direction of Seal Rocks. Mariners are urged to navigate the area with caution.

NOTE
The Precautionary Area on this chart is part of a Traffic Separation Scheme approved by the International Maritime Organization (IMO).

NOTE F
LIGHTS
Lights S, K, G and P in the vicinity of Cooper River are maintained from May 1 to October 1.

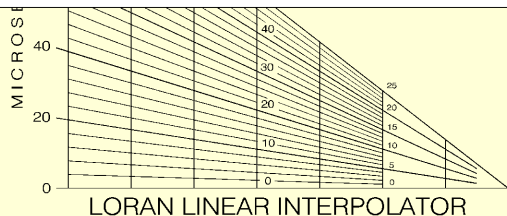
CAUTION
SUBMARINE PIPELINES AND CABLES
Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:
Pipeline Area
Cable Area
Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling. Covered wells may be marked by lighted or unlighted buoys.

For detailed information use large scale charts, see catalog

ORCA BAY
HAWKINS ISLAND
CORDOVA
SHERIDAN GL
ALAGANIK
MARTIN R SU
MILES GLACIER
MOUNT WILLIAMS
CHILDERS GL
COOPER R
MOUNT TOM WHITE
MOUNT HAWKINS
MOUNT MILLER
MOUNT STELLER
MOUNT NICHAWAK
BERING GLACIER
KALIAKH R
DUMOST R
YAKUTAGA R
PAMPLONA SPUR

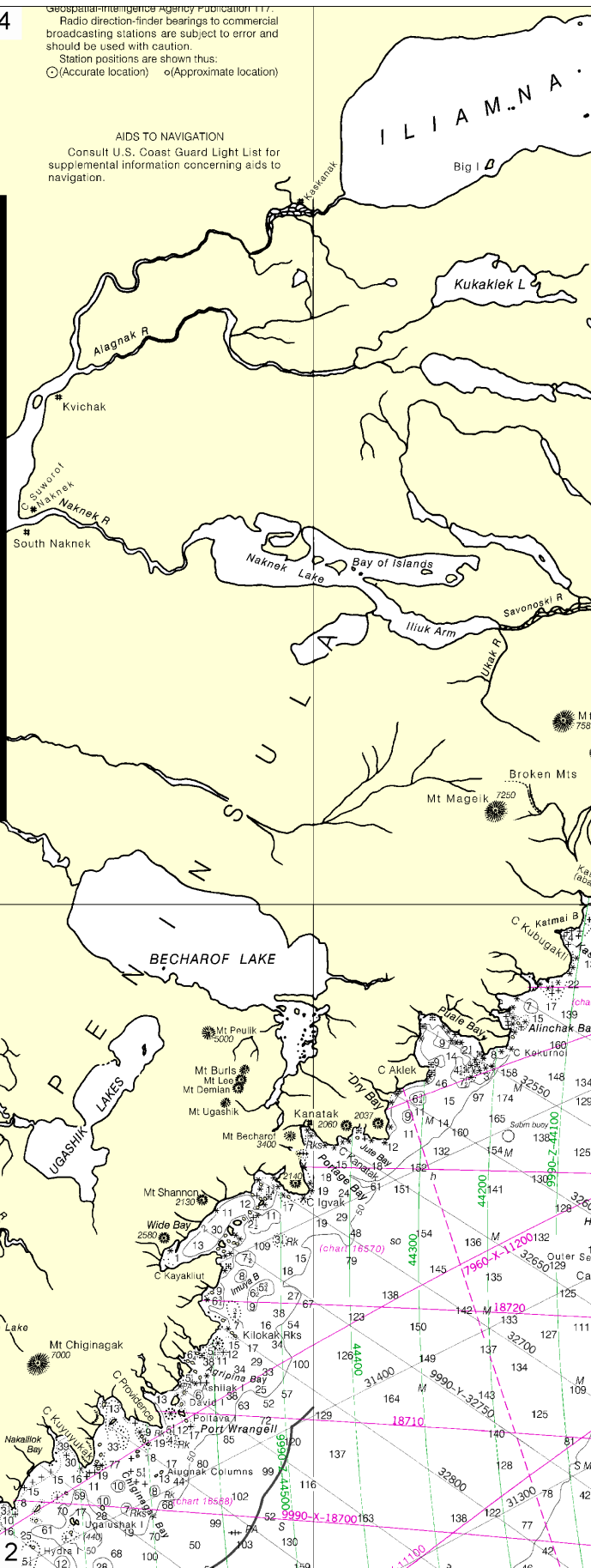
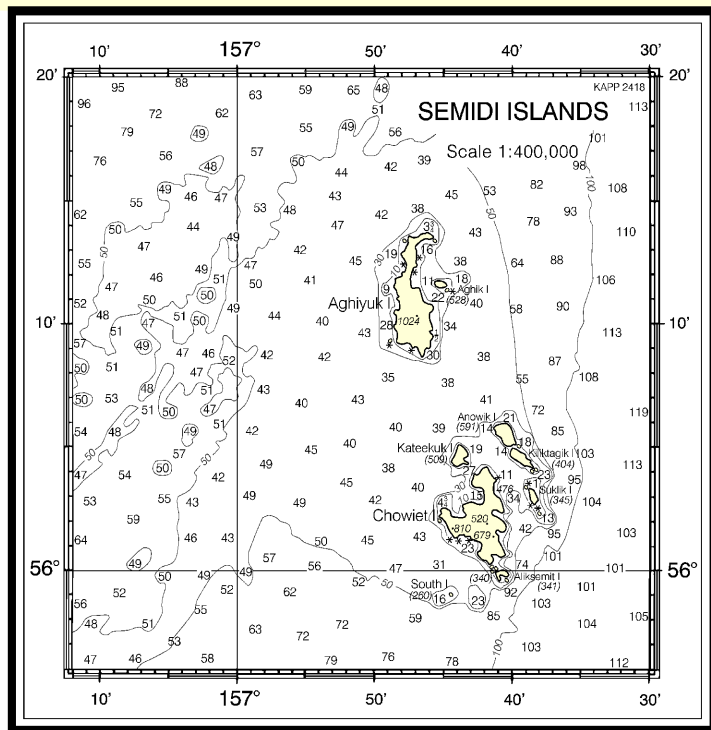
JOINS page 11

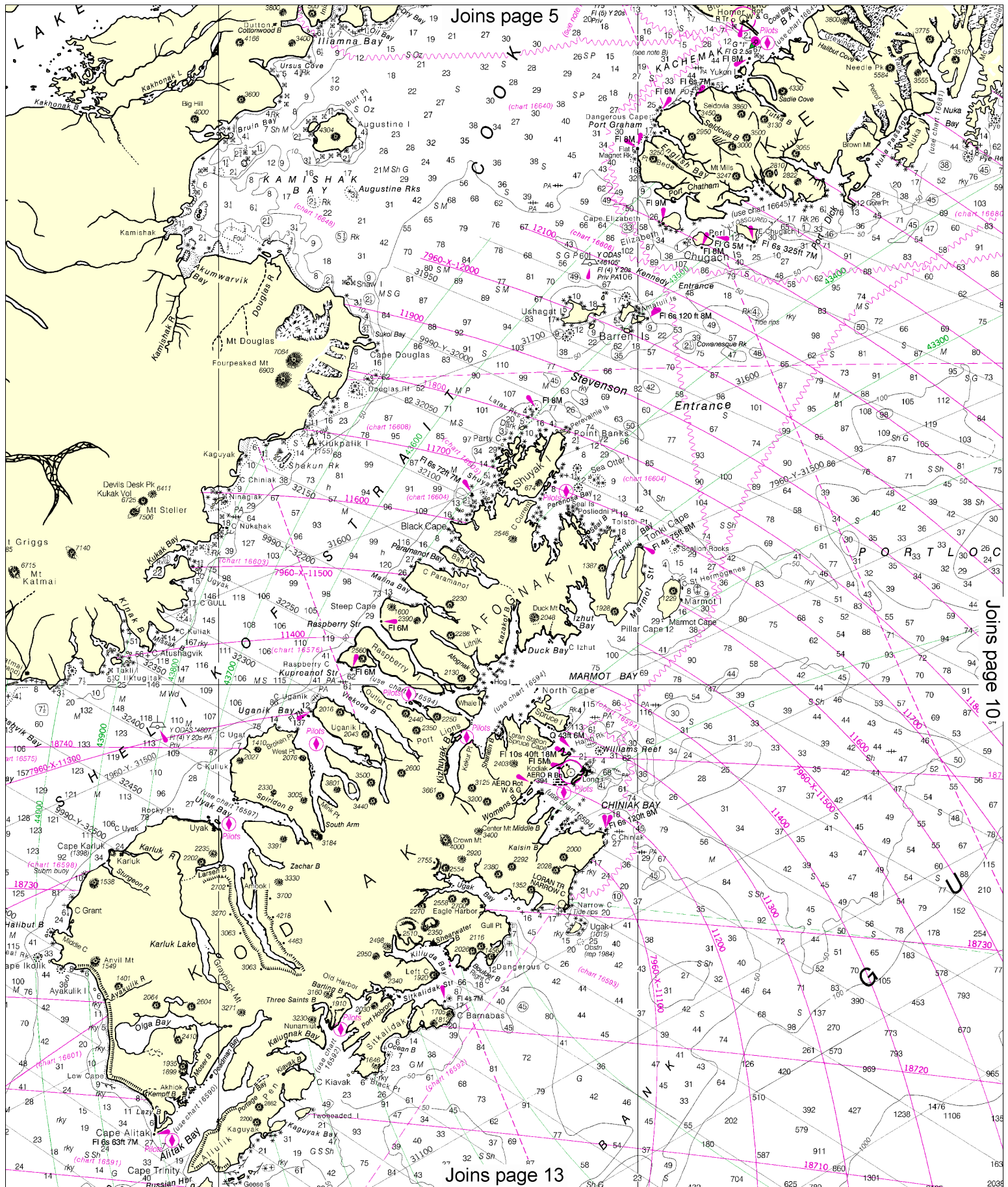
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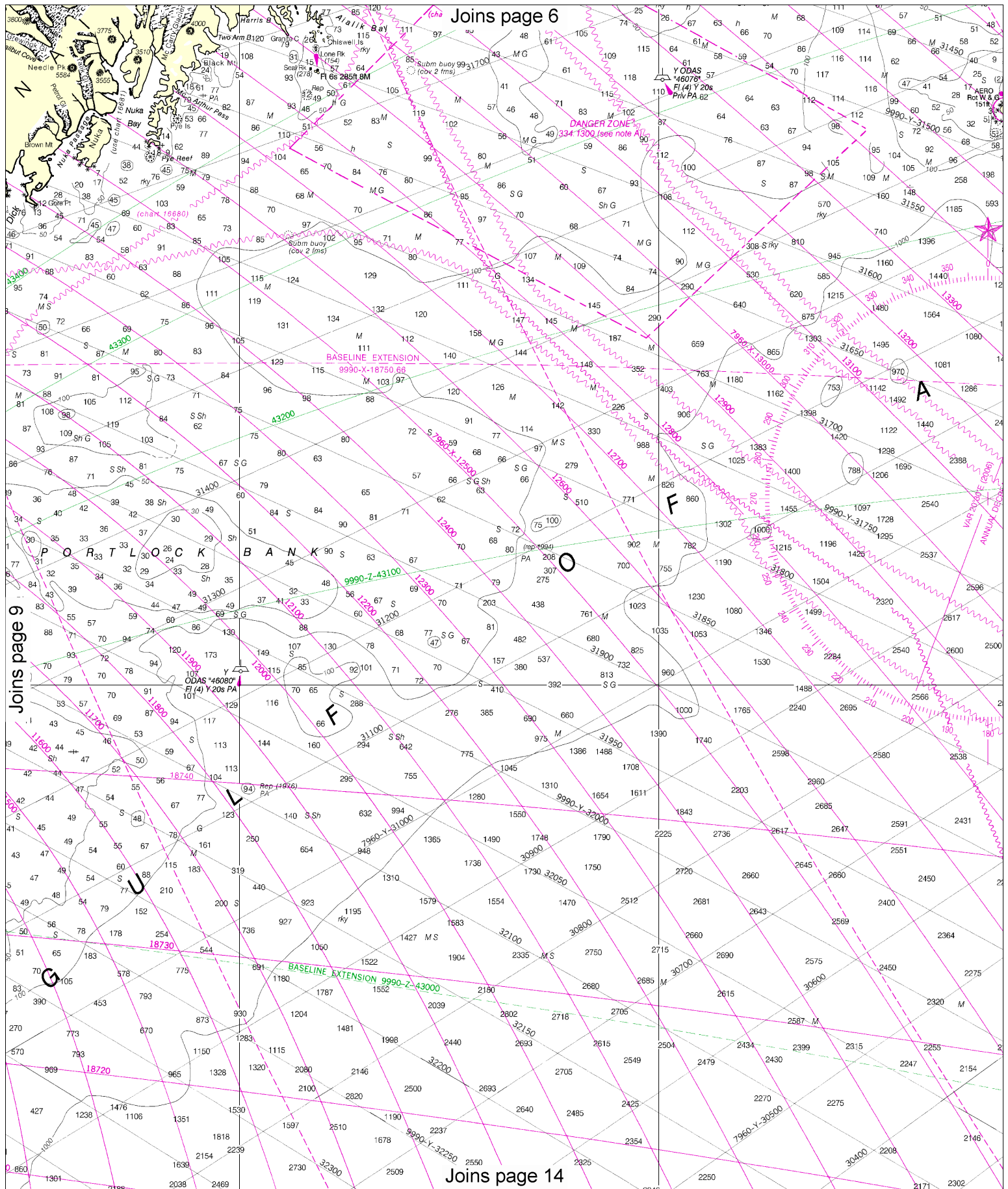


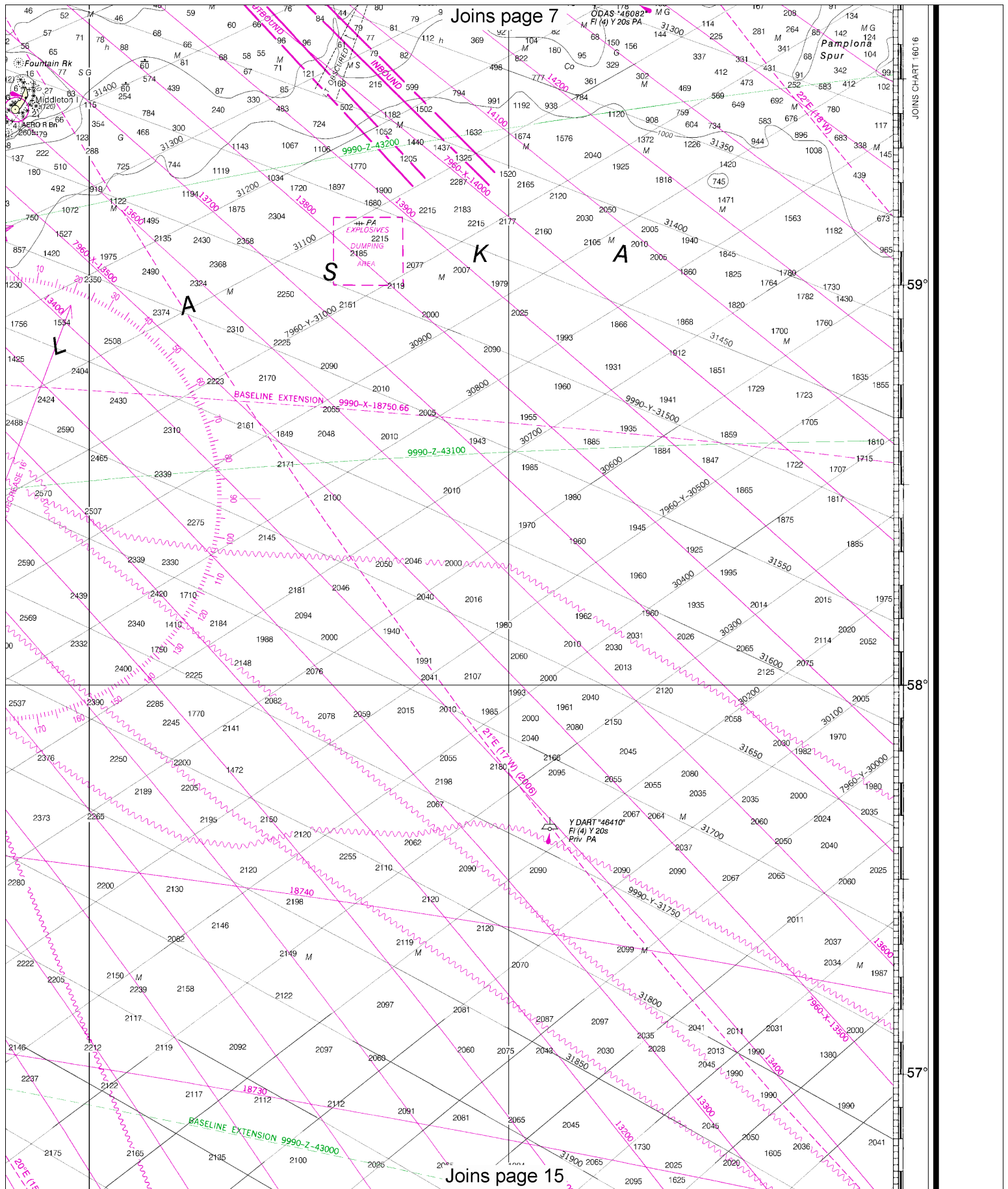
Geospatial Intelligence Agency Publication 117
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
○ (Accurate location) ○ (Approximate location)

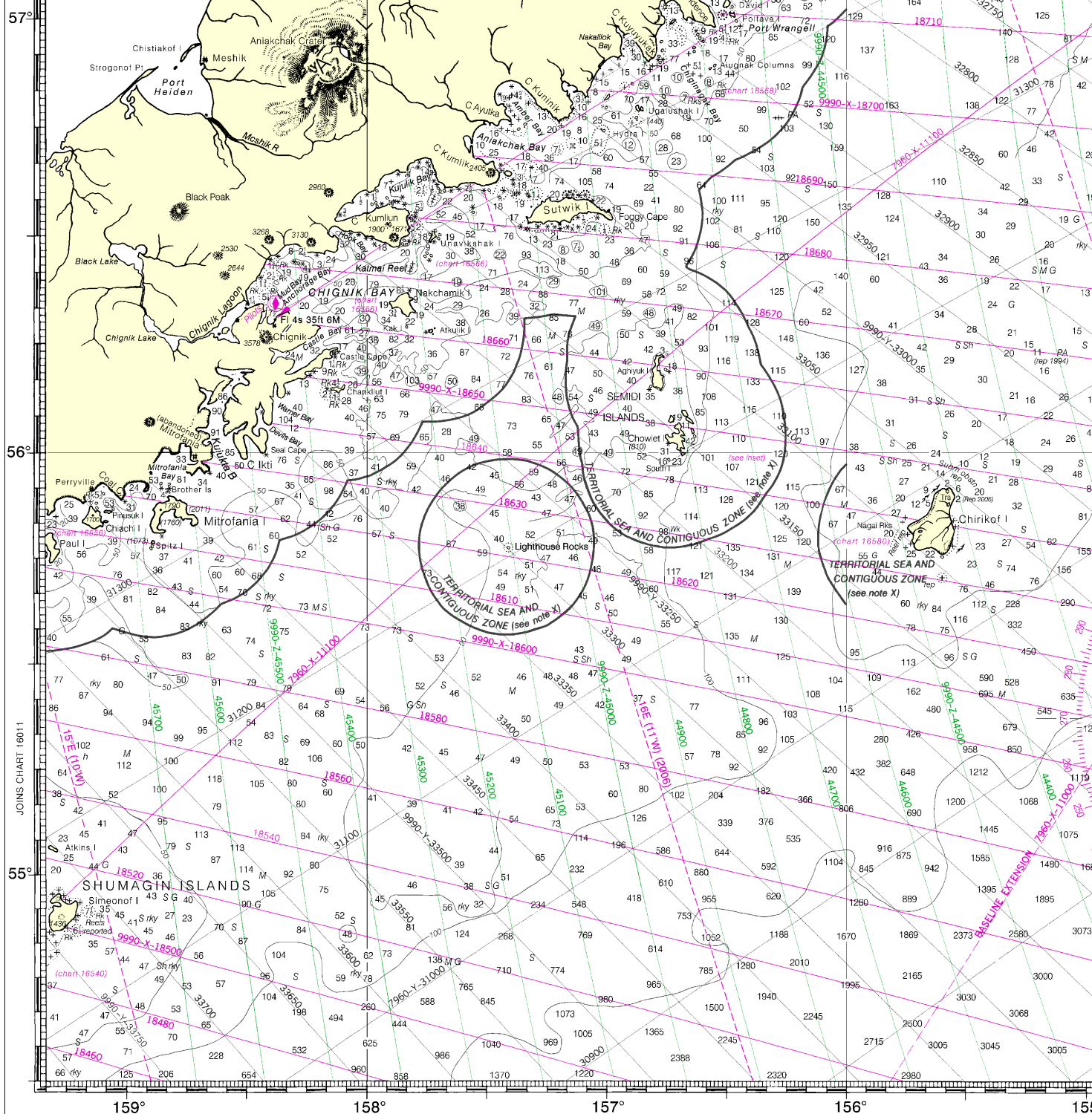
AIDS TO NAVIGATION
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.











30th Ed., Jul. / 06 ■ Corrected through NM Jul. 15/06
Corrected through LNM Jul. 04/06

16013

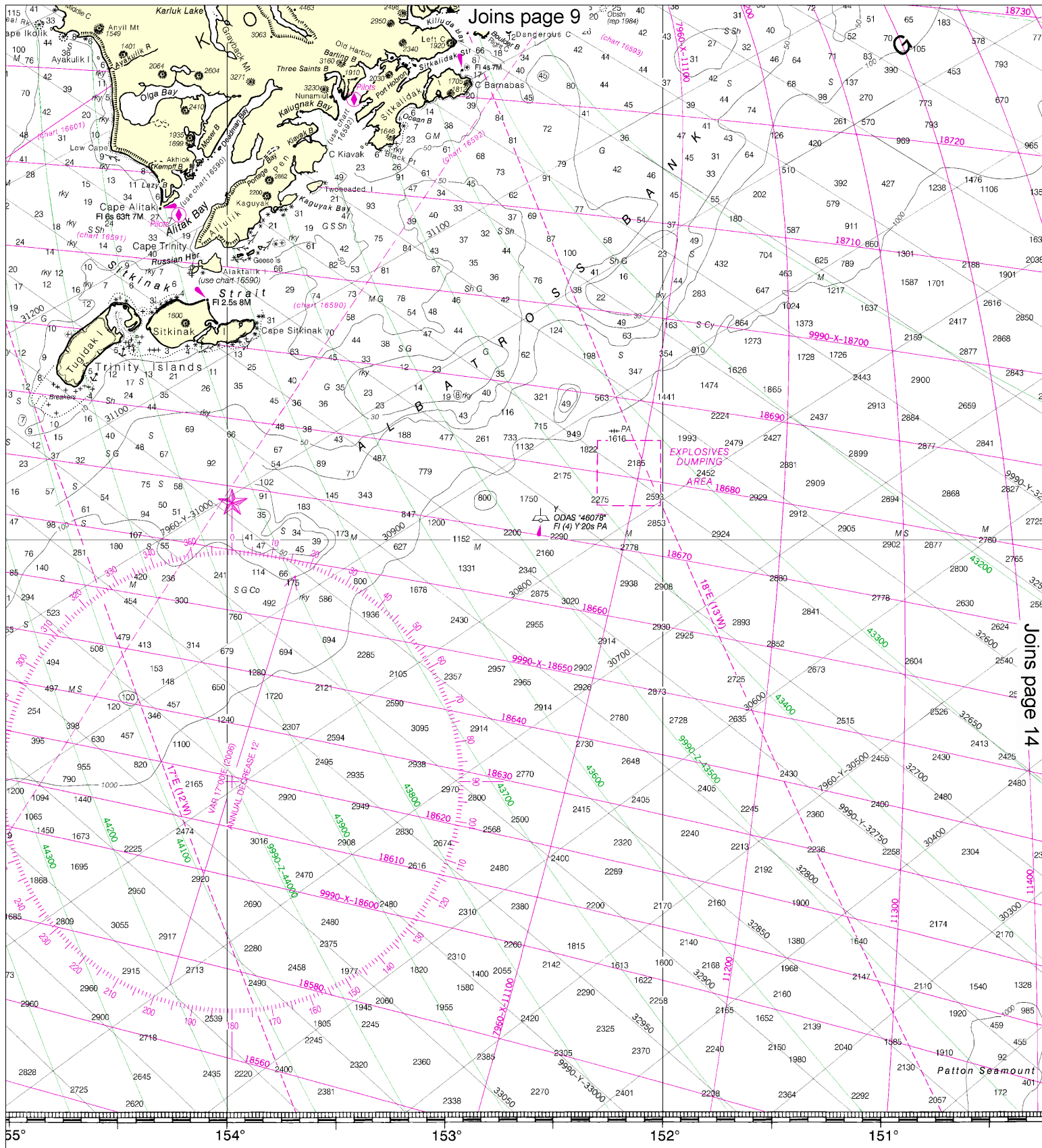
LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

Note: Chart grid lines are aligned with true north.



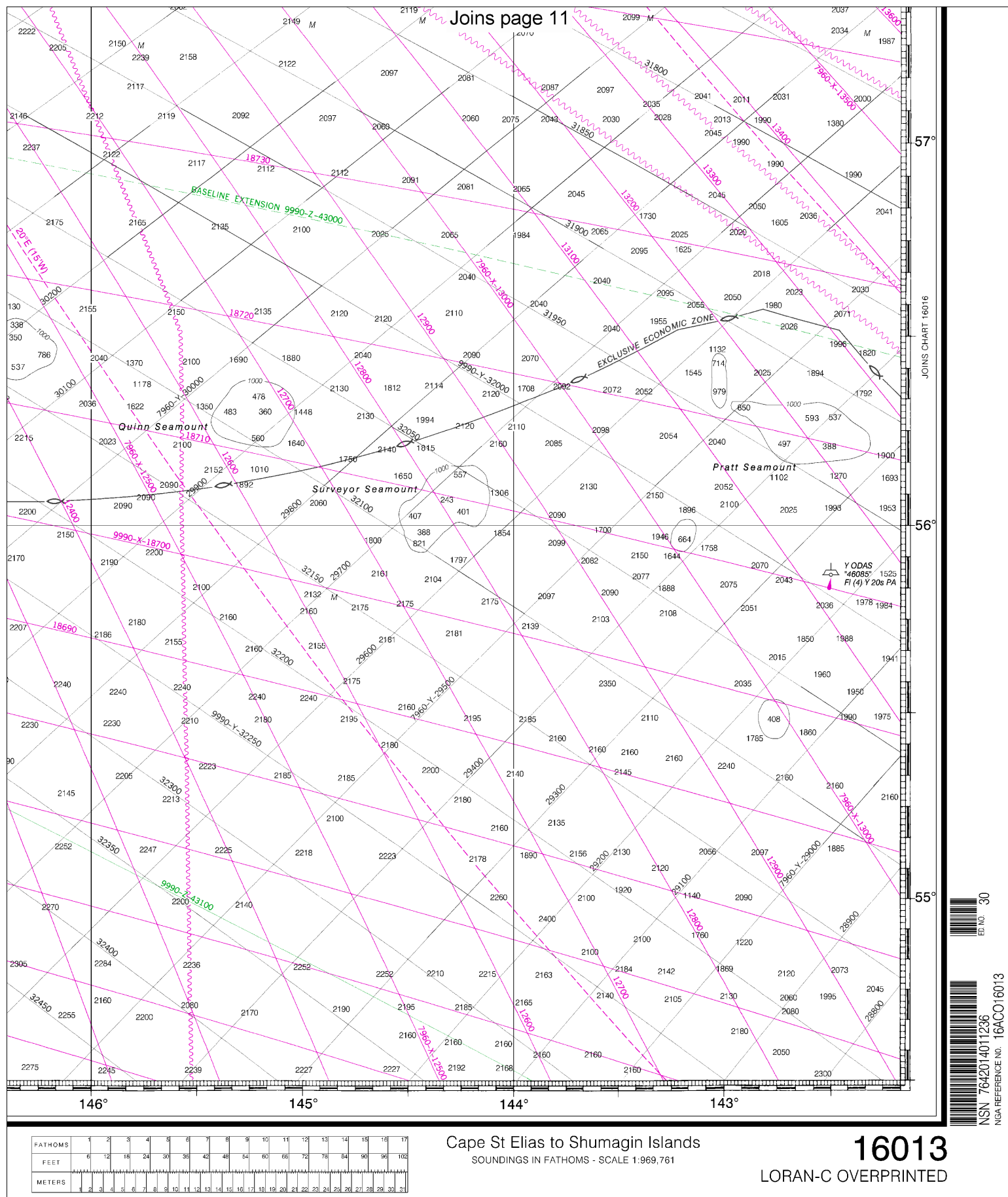
Joins page 9

Joins page 14

SOUNDINGS IN FATHOMS

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

Joins page 11

 57°

JOINS CHART 16016

 56°

55°



ED. NO. 30

NSN 7642014011236
 UGA REFERENCE NO. 16AC016013

NSN 7042014011230
NGA REFERENCE NO. 16AC016013

15



VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker